



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,316	12/20/2001	Mieke Sibeijn	253.182	4410

7590 05/29/2003

Bierman, Muserlian and Lucas  
600 Third Avenue  
New York, NY 10016

EXAMINER

PRATS, FRANCISCO CHANDLER

ART UNIT	PAPER NUMBER
----------	--------------

1651

DATE MAILED: 05/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application N .

10/029,316

Applicant(s)

SIBEIJN ET AL.

Examiner

Francisco C Prats

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

Art Unit: 1651

#### **DETAILED ACTION**

Claims 1-12 are presented for examination.

#### ***Claim Objections***

Claims 1-12 are objected to because of the following informalities:

The claims contain numerous handwritten, non-initialed, undated amendments. Such amendments are improper. See, e.g., 37 CFR § 1.52, discussing appearance of amendments. Appropriate correction is required.

#### ***Response to Amendment***

It is noted that applicant has supplied copies of the amendments filed in parent case 09/402,604. However, those amendments have not been entered into the case, because the headings of the amendments make it clear that those amendments are intended for entry into serial number 09/402,604. If applicant wishes for amendments to be entered, such amendments must be directed to the present application, and must include explicit directions for their entry.

Art Unit: 1651

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaeger (U.S. Pat. 3,268,606) in view of Sarnecki (U.S. Pat. 3,356,753).

Jaeger discloses a process of preparing  $\beta$ -carotene from *Blakeslea trispora* wherein the biomass is treated with the claimed solvents, the biomass is extracted with a water immiscible solvent, and the  $\beta$ -carotene is then crystallized in an organic solvent. See col. 1, line 45 through col. 2, line

Art Unit: 1651

43. Jaeger differs from the claims in not using a water wash to obtain the crystals by floating.

However, Sarnecki clearly discloses that solvent-extracted  $\beta$ -carotene is readily crystallized in water in a highly pure form. See, e.g. col. 3, lines 61-64; see also Example 14, at col. 6, lines 29-36. Thus, the artisan of ordinary skill at the time of applicant's invention clearly would have recognized that Sarnecki's water-based method of crystallization would have functioned at least equivalently to Jaeger's organic solvent-based crystallization method, and would therefore have been motivated to have used Sarnecki's method of crystallization in Jaeger's  $\beta$ -carotene purification method. Clearly from the disclosure of the two references the artisan of ordinary skill would have had a reasonable expectation that Sarnecki's crystallization would have functioned at least equivalently to Jaeger's crystallization.

Note specifically that the use of an oil, recited in claims 7 and 9, is considered obvious in view of Sarnecki's disclosure of the use of polyethoxy castor oil as a  $\beta$ -carotene extractant. Note further that the step of bubbling gas through the washing medium, recited in claim 8, is considered obvious in light of Sarnecki's disclosure that the water wash for crystallization is stirred for a significant length of time (e.g. 60 hours in

Art Unit: 1651

Example 14 at col. 6), the claimed use of aeration being an equivalent method of agitating the crystallization milieu.

Thus, a holding of obviousness is clearly required.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaeger (U.S. Pat. 3,268,606) in view of Sarnecki (U.S. Pat. 3,356,753) as applied to claims 1-9, 11 and 12 above, and further in view of Rose et al (U.S. Pat. 5,378,369) and Bohinski et al (U.S. Pat. 3,492,202).

As discussed above, Jaeger when taken in view of Sarnecki clearly renders obvious claims 1-9, 11 and 12. Neither Jaeger nor Sarnecki discloses the use of vegetable oil at the various times of the extraction process as recited in claims 7 and 10. However, Bohinski clearly provides motivation for adding vegetable oil to the microbial cells before cell disruption, by noting that yields are improved when this is done. See col. 1, lines 47-53. Moreover, Rose clearly provides motivation for adding oil to the cells after disruption, and even in the crystallization step, by disclosing that vegetable oil is an efficient extractant for  $\beta$ -carotene. Thus, a holding of obviousness over the limitations in claims 7 and 10 is also clearly required.


Art Unit: 1651

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francisco C Prats whose telephone number is 703-308-3665. The examiner can normally be reached on Monday through Friday, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G Wityshyn can be reached on 703-308-4743. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

  
Francisco C Prats  
Primary Examiner  
Art Unit 1651

FCP  
May 22, 2003